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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,592	02/25/2005	Christophe Bureau	10404.010.00-US	7940
<div>7590 07/18/2007</div> <div>Song K. Jung, Esq. McKenna Long & Aldridge LLP 1900 K Street, N.W. Washington, DC 20006-1108</div>				
			EXAMINER	
			LEE, CHEUNG	
			ART UNIT	PAPER NUMBER
			2812	
			MAIL DATE	DELIVERY MODE
			07/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/525,592

Applicant(s)

BUREAU ET AL.

Examiner

Cheung Lee

Art Unit

2812

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 13-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 8 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 6 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6-3-05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicants' election with traverse of Group I, claims 1-12 in the reply filed on May 4, 2007 is acknowledged. The traversal is on the ground(s) that a search and examination of the entire application would not place a serious burden on the examiner. This is not found persuasive because Group I (claims 1-12) is drawn to method of bonding two objects, Group II (claims 13-15 and 17) is drawn to a method of manufacturing, assembling or packaging a surgical, medical or Microsystems, and Group III (claim 16) is drawn to a device. Group I, II and III are classified in three different classes, and three different search areas. Even though there is an overlapping in the search areas, additional search has to be done for each specific group. Therefore, a burden would be placed examining all groups of claims upon the examiner.

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on June 3, 2005 was filed before the first action on the merits. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 8 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kusano et al. (US Pat. 5284543; hereinafter "Kusano").
4. Referring to figure 1 and related text, Kusano discloses [Re claim 1] a method of bonding two objects together (col. 1, lines 34-45; col. 3, line 66-col. 4, line 4), one of which has polymer surface (col. 4, lines 5-55) and the other has an electrically conductive or semiconductive surface (col. 5, lines 4-10), which method is characterized in that it comprises: a) the electrografting of an organic film onto the conductive or semiconductive surface (col. 2, lines 45-64); and then b) an operation of bonding the polymer surface to the conductive or semiconductive surface thus grafted (col. 3, line 66-col. 4, line 4).
5. Kusano discloses [Re claim 2] wherein the electrografting of the organic film is electroinitiated grafting (col. 2, lines 45-64).
6. Kusano discloses [Re claim 3] wherein the organic film is a polymer film (col. 2, lines 45-65).
7. Kusano discloses [Re claim 4] wherein the polymer film is obtained from monomers and/or prepolymers that are partly or completely functionalized by vinyl group (col. 2, line 66-col. 3, line 15).

Art Unit: 2812

8. Kusano discloses [Re claim 5] wherein the polymer film is obtained from a vinyl monomer chosen from acrylonitrile, methacrylonitrile, acrylates and methacrylates, acrylamides and methacrylamides, cyanoacrylates, acrylic acid and methacrylic acid, styrene, vinyl halides, N-vinylpyrrolidone, 2-vinylpyridine, 4-vinylpyridine and vinyl-terminated telechelic compounds (col. 3, lines 1-15).
9. Kusano discloses [Re claim 8] wherein the bonding operation consists of hotmelt bonding or cold bonding or a combination of the two (col. 1, lines 1-5; col. 5, lines 10-14).
10. Kusano discloses [Re claim 10] wherein the polymer constituting the polymer surface chosen from polyethylenes, polypropylenes, polystyrenes, polyacrylonitriles, polysiloxanes, polyesters, polyorthoesters, polycaprolactones, polybutyrolactones, polyacrylics, polymethacrylics, polyacrylamides, epoxide resins, copolymers thereof and blends thereof (col. 4, lines 5-55).
11. Kusano discloses [Re claim 11] wherein the polymer constituting the polymer surface is a hotmelt polymer (col. 4, lines 56-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kusano as applied to claim 1 above, and further in view of Naarmann (US Pat. 4547270).

13. [Re claim 7] Kusano fails to disclose expressly wherein the organic film is obtained from diazonium, sulfonium, phosphonium or iodonium salts, or mixtures thereof.

Naarmann discloses an electrochemical polymerization of pyrrole with phosphonium salts on an anode sheet (col. 1, lines 5-50).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use phosphonium salts to obtain an organic film, as taught by Naarmann, because it would have been to obtain high electrical conductivity, good thermal stability and stability to oxygen (Naarmann, col. 1, lines 51-54).

Art Unit: 2812

14. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kusano as applied to claim 1 above, and further in view of Capote et al. (US Pat. 6335571; hereinafter "Capote").

15. [Re claim 12] Kusano fails to disclose expressly wherein the polymer surface is a polymer film coating a conductive or semiconductive material.

Referring to figures 10-12 and related text, Capote discloses wherein a semiconductor chip 100, which is coated with a liquid polymer resin 111, and a substrate 101 coated with a polymer flux 109 are bonded together (col. 8, line 61-col. 9, line 20; see fig. 10).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a polymer film coating a conductive or semiconductive material to bond onto a base, as taught by Capote, because it would have been to obtain a semiconductor chip on a substrate with a polymer as an adhesive.

Allowable Subject Matter

16. Claims 6 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: claim 6 recites the polymer film is obtained from monomers and/or prepolymers that are partly or completely functionalized by cyclic groups that can be cleaved by nucleophilic or electrophilic attack.

Art Unit: 2812

Claim 9 recites the cold bonding is carried out by means of a substance capable of dissolving or swelling the polymer surface to be bonded and the organic film electrografted onto the conductive or semiconductive surface.

These features in combination with the other elements of the base claim are neither disclosed nor suggested by the prior art of record.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheung Lee whose telephone number is 571-272-5977. The examiner can normally be reached on Monday through Friday from 8:30AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Lebentritt can be reached on 571-272-1873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Cheung Lee

July 13, 2007



MICHAEL LEBENTRITT
SUPERVISORY PATENT EXAMINER